

Sexual attitudes, preferences and infections in Ancient Egypt

Robert S Morton

Unlike the puppets, we have the possibility of stopping in our movements, looking up and perceiving the machinery by which we have been moved. In this act lies the first step towards freedom. P. L. Berger (1966)¹

Abstract

This socio-sexual review of Ancient Egyptian society aims to increase awareness that the prevalence of sexually transmitted diseases (STDs) is largely determined by the way a society is structured and how that structure functions. The prevalence of STDs in Ancient Egypt has been found to be low. This state of affairs was maintained for centuries. Although the structure of their society was rigidly hierarchical, Egyptian people made it function in an acceptable way. What might be learned is concerned more with prevention than cure. Whether this has any relevance today is discussed.

Genitourin Med 1995;71:180–186

Keywords: Ancient Egypt, sex, attitude, infections

Introduction

An earlier study² showed that the Ancient Greeks structured their society on democratic principles. They adopted some ideas long employed in Ancient Egypt. Over the last 2,000 years the methods of Ancient Greece have been widely adopted and adapted in the Western World with variable success in terms of healthy social order. This study attempts to learn whether Ancient Egypt's history reveals anything worthy of reconsideration and application today.

Ancient Egypt—an Overview

The Upper and Lower Kingdoms of Ancient Egypt were united in 3118 BC. Their peoples were descendants of early hunters who had once lived in a green Sahara. They had settled, with others from both the east and the south, along the banks of the river Nile. There they developed one of the world's earliest civilisations. This was a civilisation which at its peak of attainment and development was to produce temple and tomb wall paintings and sculpture of a high order, such architectural wonders as the Giza pyramids³ and such great works of art as the death mask of the young King Tutankhamun.⁴ In addition, the early Egyptians acquired an empire. They also developed the world's first mythologically-

based religion complete with an assurance of an afterlife—which was to include facing a moral tribunal to give an account of oneself. With only a few temporary interruptions by famines, nomads and invaders, Ancient Egyptian society flourished for some 3,000 years. In the last few hundred years BC, Greek influences were strong in Egypt. In 30 BC it became a province of the Roman Empire. This was followed by the influence of Christianity. Today and for some 1,300 years, the Muslim faith has predominated.

The table shows the approximate dates of the important Old, Middle and New Kingdoms and other periods, together with the Dynasties concerned with each. Murnane⁵ gives the names and dates of the Pharaohs of each dynasty and lists the outstanding features of each reign.

Egyptian society

Political, Economic and Social Structure and Function

Egyptians believed their kings or pharaohs to be descendants of the sun god Re. Each governed with the help of nobles, often highly educated relatives. Government was divided into departments each with a large staff including state officials and scribes.

Egyptians cherished and practised what they called *Ma'at*—a sense of good order in both the conduct of their private affairs and their political institutions. Responsibility for *Ma'at* was a Pharaoh's principal obligation to his people. He was seen as having the power to ensure cosmic harmony as well as well-ordered balance in affairs on earth. Furthermore, Egypt's geographical setting favoured long periods of peace. It had natural defences—extensive desert to the west and sea to north and east. All this together with the hierarchical political structure made for a near permanent state of blessed uneventfulness. The occasional plague, the arrival of nomadic tribes, the exodus of the Israelites and even the 100 years take-over following the Hyksos

Periods, date and dynasties of Ancient Egypt

Periods	Dates	Dynasties
Archaic	3118–2686 BC	1 & 2
Old Kingdom	2686–2181 BC	3–6
First Intermediate Period	2181–2040 BC	7–10
Middle Kingdom	2040–1786 BC	11 & 12
Second Intermediate Period	1786–1567 BC	13–17
New Kingdom	1567–1080 BC	18–20
Third Intermediate Period	1080–664 BC	21–25
Late Period	664–332 BC	26–30
Ptolemaic Period	332–30 BC	31

Address correspondence to:
R S Morton, 9 Cortworth
Road, Sheffield S11 9LN,
UK.
Accepted for publication
6 March 1995

invasion, did little to disturb this. The relative absence of social upheavals would favour low prevalence rates of sexual infections.

Economically, Egypt depended on the river Nile. It flooded for several weeks from each July. The mud left behind was highly fertile. Men learned to master well-sustained irrigation. This, with the abundance of sunshine, made two harvests per year a possibility. When the land finally dried out, farmers went to work for the Pharaoh, usually as builders. This was seen as a relatively easy way of paying one's taxes.

Exporting surpluses was very worthwhile, such as, for example cereals, textiles and papyrus as paper. Artistic luxury goods were bartered for wood from the Lebanon, metals from Asia and incense (much used in temples) from the land of Punt, believed to be Somalia today. Thus agents travelled extensively, particularly during the more prosperous periods of the Middle and New Kingdoms. In spite of occasional drought years there was nothing approaching poverty. All were economically well provided for. The swings to poverty and prosperity, both well-recognised as determinants of epidemic levels of sex infections in recent centuries were non-existent in Ancient Egypt.⁶

The population of Ancient Egypt has been variously estimated. The estimates are so disparate as to be unreliable. They average out at around 2.5 million. As regards life expectancy, a study of 709 Dynastic skulls in the Department of Anthropology at Turin showed the average age at death to be 36 years.⁷ People lived mostly in some fifty towns, the great majority of them along the Nile. Building land was limited and so houses tended to be tall and narrow. Mud bricks were used. Disposal of personal and household waste was primitive.⁸ The smallness of populations of Egypt's towns would not favour high prevalence rates of sex infections.

Scribes recorded society's affairs and progress. The original recording system used hieroglyphics, which long persisted in sculpture and tomb and temple paintings but developed into hieratic script—one of several—which was used principally in business and for papyrus and letter writing.

From archaeological, textual and representational sources, we learn that families formed the strong fundamental fabric of Egypt's closely-knit society. Girls trained in household affairs in the home with their mothers from an early age. Boys, often from the age of eight, became apprentices with their fathers. Apart from agriculture and house building, many boys trained as potters, carpenters, leather workers and metal workers, particularly with copper. Boat-building for fishermen was in demand. Through more extensive schooling, some boys aimed to follow their fathers and become scribes. Tomb and temple building did not only call for stone masons but for accomplished sculptors and artists. Aldred⁹ gives a detailed account of the skills of both groups.

Social life and leisure at all times revolved

around the family. Home, children and parenting were the principal sources of individual contentment. The Egyptians were devoted parents. Mother's role predominated in each child's early years. Thereafter fathers increasingly directed the boys' education, both general and social. All were well schooled in *Ma'at*.

There was a very wide variety of children's games. Boys soon learned swimming, fishing and bird netting. Trips to the Nile or to the sea with a family picnic were popular. The girls at picnics, parties and festivals, entertained with songs and dances. Family life was not only a source of learning for life but was a focus of early social endeavour. It was not lacking in terms of civilisation and refinement.

The intensity of parenting—civilising, socialising and giving a veneer of sophistication—was clearly aimed at equipping each child for early assumption of adult responsibilities. In Darwinian terms they were "fitted" to function acceptably within a well tried social structure by the age of 12–14 years.

Sexual life

Marriage and Sexuality Leca¹⁰ tells us that a popular wisdom text counselled marriage at 20 years of age. The majority of girls, however, married between 12 and 13 and the boys at a year or two older. Menstruation began around 14 years and marked the change from childhood to womanhood. There was no legal age of consent. To marry and have children was seen as a most welcome duty.

According to Erman,¹¹ the purpose of marriage was "to found for oneself a house". Marriage was wholly a personal matter requiring neither legal nor religious sanction or ceremony. The girl left the protection of her father's house for that provided by her husband. A series of parties for relatives and friends over the first year celebrated the union and must have encouraged harmony.

As regards marriage per se, there were no restrictions on unions with slaves or foreigners. As wives, women retained degrees of independence far beyond those in many later societies. As mistress of the house, a wife spent much of her time mothering, preparing food, brewing beer and making clothes. A few involved themselves in small business ventures. Far from being a mere servant or toy, the Egyptian wife viewed herself and her husband as complementary companions, each aiming to fulfil their obligations to the satisfaction of their partner. This and the view in some quarters that Egyptian husbands were generally excessively fond of their wives, must go some way to explain the aura of domestic contentment emanating from wall paintings.

Polygamous alliances and concubinage were neither popular nor common. Incestuous marriages, for example pharaohs with sisters, were accepted since they were rooted in an all-pervasive mythology.

Not infrequently marriages ended in early death. The dangers of childbirth made the greatest contribution. Remarriage frequently ensured two parents for children.

Divorce was not common. Like marriage it was by agreement only. There was much social pressure against it according to Trigger *et al.*¹² Again, the *Ma'at* concept of family was the paramount consideration. Ill-treatment by a husband and adultery by either party were grounds for divorce. Separation without vindictiveness was favoured, the wife generally returning to her father's house with the children. Both partners were free to remarry.

In barren marriages the wife usually carried the burden of blame. Infertility could be grounds for divorce. Adoption was a more socially acceptable solution.

In cases of doubt about pregnancy, a medical examination was sought. The woman's urine was used to water the young shoots of cereals. Strong growth confirmed pregnancy. Rapid growth of barley indicated a boy child; if wheat was more favourably affected then a girl was to be expected.¹³

Childbirth was in the hands of midwives. The squatting position with a birthing stool or birthing bricks was widely used. Women sought the support of an array of helpful goddesses. Complications such as birth injuries, haemorrhage, infection and uterine prolapse were common. A special knife was used to cut the umbilical cord¹⁴ [Fig. 1].

Mothers were held in high esteem. Robins¹⁵ quotes an apt New Kingdom poem illustrating the importance of a mother's role in infant care. She also points out that fathers instructed sons to acknowledge, freely and

often, their mothers' contribution. Thus we find evidence that mothers were long held in affection and honour. Since the time of the Old Kingdom, successful highborn sons are to be found side by side on monuments with their mothers.

Religion and sexuality With the unity of Upper and Lower Egypt around 3000 BC, the new country found itself with a surfeit of gods and goddesses—national, regional and domestic. Thus the banks of the Nile today abound with temple remains, most dating from the New Kingdom. They feature an inner shrine where the god or goddess—as a statue—lived under the regular daily care of priests. Ordinary people could ask a priest to seek the god's guidance on their behalf. Such priestly services included health advice and dream interpretation. The goddess Hathor was seen as having a special interest in women's fertility and sexuality. Women also had a part in temple ritual.¹⁶

During festivals the statue of the god would be paraded from the temple through the streets by the priests and priestesses. The god Min was the principal god of fertility. His special temple was built by King Rameses III of the last dynasty of the New Kingdom, which ended around 1080 BC. The restored temple paintings show festival and feast scenes. After sacrifices have been made to Min, his statue always with an erect penis, is borne through the streets. His attendants are seen to be carrying heraldic lettuce plants. The Ancient Egyptians regarded lettuce as an aphrodisiac.¹⁷

In contra-distinction to Greece and India, Egyptian temples were not used to house prostitutes.

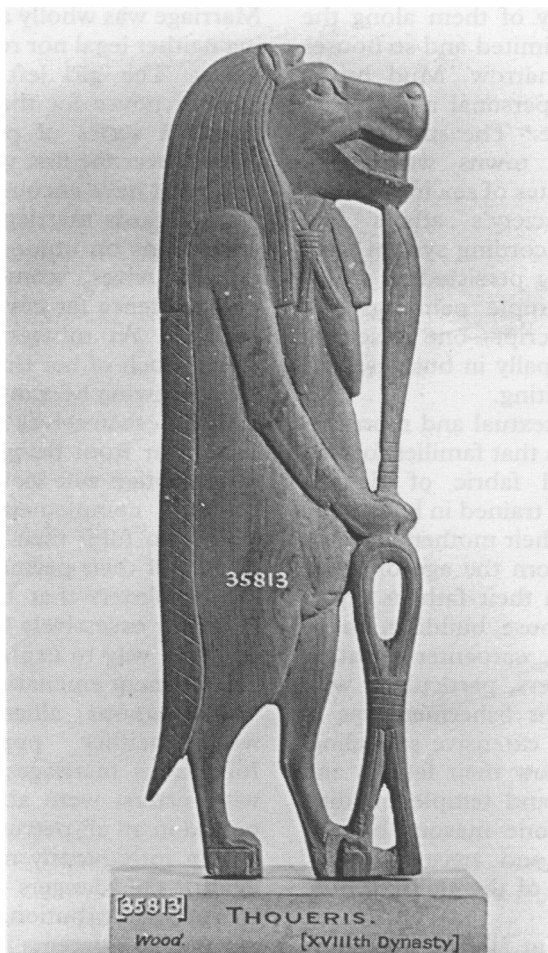
Art and sexuality Egyptian art is more than the craftsman's skill in execution. Every architect, sculptor and painter had behind him and in him, the productive power of the god Ptah of Memphis, called the Creator. He is always shown, ram-headed, at his potter's wheel. The creativity of the Ancient Egyptians over 3,000 years is staggering in both quantity and quality. Aldred gives 198 illustrations of such works with a clear account of the materials and methods used.⁹

In contrast to other schools of art which freely use nudity, the Egyptians convey just as much erotic passion in clothed, symbolic figures. This reflection of attitudes applies to gods as well as mortals, to sculpture in the round and in relief as well as to wall paintings. During the prosperous New Kingdom period, at least to the author's eye, tomb paintings became less prim, with more fluid lines and brilliant colours. Contemporary love poems were less restrained and modest.

Egyptians believed that procreation, like eating and drinking, existed in the afterlife. Provision was made in tombs for all these activities. Hence the erotic symbolism of some tomb wall paintings and the representations of coitus in the hieroglyphics which accompany them.

Erotic literary contributions are found in adventure stories, in courtly, romantic tales and love poems according to Manniche.¹⁸ She

Figure 1 The hippopotamus goddess, Tewert, protectress of women in pregnancy and labour. Her hand rests on a 'sa' hieroglyph signifying protection. She carries an obsidian knife. Obsidian has the appearance of bottle glass. It is probably formed by lightning striking into desert sand. (Reproduced by permission of the British Museum.)



also tells us that Wisdom Texts, with their double entendres, deal most aptly with relations between the sexes. These texts were copied and re-copied down the centuries. Other books offered separate interpretations of the dream life of men and women. All such writings were free of mock modesty.¹⁹

Contraception and abortion Only two of the nine papyri of medical interest mention contraception. The Kahun papyrus, attributed to the end of the Middle Kingdom²⁰ (circa 1790 BC) is to be found in the Petrie Museum of Egyptian Archaeology in University College, London. It has had several translators. All are agreed regarding a prescription to prevent conception. Its main ingredient is crocodile dung, to be "dispersed finely in sour milk or honey" and injected into the vagina "with a pinch of natron" (sesquicarbonate of soda).²¹

The Ebers papyrus which offers prescriptions for uterine, genital and urinary complaints, also offers a contraceptive.²² It consists of acacia (prepared from gum arabic as secured from the tree's trunk) and dates, both finely ground in honey. It is recommended that a ball of material (presumably linen) be soaked in this mixture and placed in the vagina.

Breast feeding was commonly pursued for three years in Ancient Egypt.²³ It has long been believed to make a modest contribution to contraception. An amulet representing the moon and worn round the neck was said to ensure production of breast milk.²³ Two or three children per household seems to have been the usual.

Induced abortion was, like adultery, generally condemned. There is some textual evidence of it occurring in Dere el Medina, but no information regarding the methods used.

Sexual practices and preferences Perhaps in view of the popularity of early marriage, premarital sexual activity is rarely mentioned although single males might legitimately have a mistress. Prostitution was also socially acceptable as behaviour for bachelors, soldiers, travelling business agents as well as men away from home for extended periods, for example, while working on major building projects.²⁴ Complaints about prostitution were not concerned with social or moral censure but with time wasting.

The towns of Abydos and Dere el Medina, adjacent to major building projects had houses of prostitution replete with singers and dancers.²⁵ The progeny of such liaisons are said to have been well cared for. King Cheops of the largest pyramid at Giza is said to have encouraged his daughter to join the oldest profession and so help pay his builders.²⁶ Leca confirms this and gives a warning about the dangers of married women travelling and living away from home and husband.²⁷

Coitus is widely represented in hieroglyphics but all sources are discreet or uninformative about the variations of heterosexual activity such as cunnilingus and fellatio. The same applies to male homosexuality. Wisdom texts are also unclear and pictorial evidence fre-

quently ambiguous; for example, in wall paintings the sex of intimate couples is not always obvious. Leca reports homosexuality as overt in Memphis and two other towns.²⁸ During the 25th dynasty Pharaoh Neferkare is reported to have had sexual relationship with his army general, Sisene.²⁹

Lesbianism goes unreported and the only reference to bestiality is in the Dream Books. Herodotus, the Greek historian who lived in Egypt for some years, reported that the bodies of dead but beautiful wives always arrived late at the embalmers, that is, only after several days. The reason, he said, was to minimise the prevalence of necrophilia.³⁰ Leca²⁸ makes passing reference to bestiality and flagellation. He also says the punishment for rape was "l'amputation des organes genitaux".

Sexually transmitted diseases in Ancient Egypt The power of magic pervaded all levels of society, every day throughout Ancient Egypt's three millennia. Almost everyone wore or carried an amulet or charm against evil or illness. In every home small statues were to be found. The portly dwarf goddess, Bes, ensured the welfare of children and the family generally. Tattoos on the thighs of itinerant female musicians, acrobats and dancers, often featured the goddess Bes. Manniche says they were meant to protect specifically against gonorrhoea.³¹ Many physicians were not beyond enlisting the help of experienced magicians (fig 2).



Figure 2 Imhotep, chief physician to the 3rd dynasty pharaoh Djoser (c. 2686 BC). Imhotep was also an architect, became vizier to the pharaoh and was eventually deified. Imhotep is the most famous of about 100 named physicians. The original statue was made between 900 and 300 BC. It was found at Karnak and is now with Denver County Medical Society in the U.S.A. The photograph is of one of 100 bronze replicas.

Personal hygiene was important to the Ancient Egyptians. Using powdered calcite, sodium carbonate and salt in a honey paste they scrubbed and scraped their bodies. They washed frequently and before meals. The men were clean shaven. The women also shaved and indulged in depilation. The aim was to keep free of body and pubic lice. Not everybody was successful. Nits have been found near the base of hairs of mummies.

Some say circumcision was simply an essential part of personal cleanliness. Others say it was first practised by the Egyptians in pre-dynastic times in the belief that the female soul in men dwelt under the prepuce and should be released before manhood. In dynastic times it was apparently no more and no less than a routine ritual that welcomes a boy into adult society. The favourite time was around the boy's 14th birthday [Fig. 3].

It has been suggested that the Jewish lazem, as used in circumcision by rabbis, may have originated in pre-dynastic times.³² There is no evidence from mummies that female circumcision was ever performed in Ancient Egypt.

Although details of genitourinary symptoms in women appear in various texts, there is no clear evidence of venereal or other sexually transmissible disease. Leucorrhoea, we are told, may respond to mud baths. Herb plants in home-brewed beer is a favoured alternative.

The Ebers papyrus was found in a temple at the city of Abydos in Upper Egypt. It is generally dated circa 1555 BC. The clear medical advice it gives, as translated by Ebbel,³³ is much concerned with gynaecology. Disorders of menstruation, not infrequent in pelvic infection we are told, respond to anti-inflammatory poultices of crushed onion and mustard in a base of pine sawdust. Pelvic disease was common and clearly a major interest.^{34 35} Pelvic adhesions have been found in some mummies. The general view according to Reeves³⁶ is that these result from appendicitis. Shanahan's recent observation³⁷ that 10% of cases of "appendicitis" are in fact cases of sexually transmitted *Chlamydia trachomatis* peritonitis calls for application of modern micro-biological methods to material from mummies. The need for this is underlined by the observation in one mummy that "the topography of the adhesion, which crosses the pelvis, is somewhat unusual".³⁸ Salpingitis is almost always bilateral.

Evidence of pelvic inflammatory disease also raises the possibility of gonorrhoea. According to Ghalioungui³⁹ it must have thrived in the demimonde of the builders' towns of Dere el Medina and Abydos. For obstinate cases of leucorrhoea and burning micturition, in association with pelvic disease, a not uncommon combination in gonorrhoea, the Ebers papyrus recommends that consideration should be given to treatment with balanites oil (expressed from the nuts or fruits of the *Balanites aegyptiaco*) with honey, flakes of copper and stibain (a corruption of stibium or stibinus which is antimony). This prescription is recommended as "excellent to expel purulence".⁴⁰

No Egyptian record has been found of burning micturition associated with urethral discharge in men. Epididymitis, a common complication of gonorrhoea, may be recognised in the Egyptian diagnosis of "orchitis".

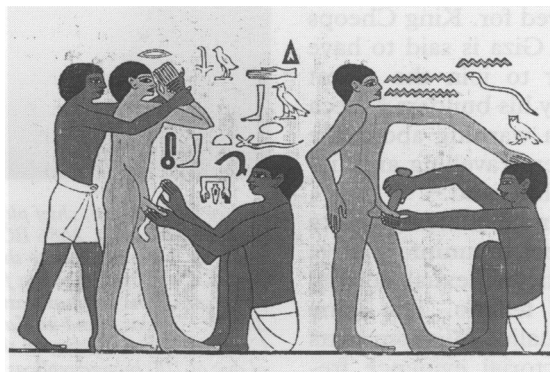
It is of interest that the Ebers papyrus should be dated 1555 BC. With the departure of the Hyksos invaders around 1557 BC the Egyptians pursued cohesive and somewhat aggressive policies. They dominated their southern neighbours—the Nubians. In addition, they made conquests in Palestine and Syria and thus developed an empire. One wonders how many soldiers returned home with gonorrhoea to produce complicated disease in their womenfolk. The Ebers papyrus details are suggestive.

For clear evidence of gonorrhoea in dynastic times we must look elsewhere. Throughout history gonorrhoea is typically associated with casual intercourse in travellers. The nomadic tribes of Egypt came from countries to its east and south. The exodus of the Israelites from Egypt, after some 400 years there, took place around 1280 BC. During their 40 years in the Sinai "wilderness" they did battle with the no less nomadic Midianites. Moses' troops returned with 24,000 prisoners—all women. Very soon thereafter some of Moses' troops suffered from "the issue" generally interpreted as urethral gonorrhoea. The book of Numbers, Chapter 31, goes on to tell how Moses dealt with the threat of an epidemic. Clearly the disease, its association with intercourse and its short incubation period, were well recognised by Moses.⁴¹

Although there is no direct evidence of gonorrhoea in Ancient Egypt, there is enough circumstantial evidence to conclude that it did exist there. Modern microbiological tests on pelvic material may confirm this and give some idea of prevalence. Descriptions of genital skin lesions in men raise questions of the possibility of genital warts and genital herpes. Nothing, acutely painful and destructive, is found to suggest the possibility of chancroid.

There have been attempts to declare instances of old periostitis in first and twentieth dynasty mummies as evidence of congenital syphilis.^{42 43} Wholehearted support for this diagnosis has not been forthcoming,^{44 45} and the Cockburns declared available examples as "certainly not syphilis".⁴⁶ What is remarkable is that no investigator has made an acceptable

Figure 3 Circumcision. One of two reliefs in the tomb of Ankh-ma-Hor at Sakkara (6th dynasty). The knife is probably of sharpened flint. Representations of naked workmen on the walls of mastaba type tombs show how widespread was removal of the prepuce ('garnata', in Ancient Egyptian).



alternative diagnosis for this apparently well-recognised finding. The possibility that altered yaws or endemic syphilis was the cause, calls for consideration and research.

Discussion

The sexually transmitted diseases were not common in the relatively static population of Ancient Egypt. Nor is there solid evidence that such social upheavals as occurred resulted in epidemic peaks of prevalence. It is clear that Egypt's social structure and the orderly way it functioned favoured prevention. This achievement is underlined by both its consistency and continuity.

As regards the structure of Egyptian society, there are two notable features: its rigidly hierarchical nature and the absence of any recognition of adolescence as we know and define it. The structure functioned successfully through *Ma'at* and the social cement of the family. Within this setting mothers predominated in the early years of a child's nurturing. The influence of fathers grew with the years. With puberty and very early marriage the child became an adult. Together and for a year parents gave support to young newlyweds. The paramount figure in the family was the mother. Sons and husbands honoured and recorded their debt and admiration unstintingly. It is little wonder that in 1840 Lady Morgan wrote of Ancient Egypt—"that land where man was wisest".⁴⁷

In modern public health parlance the Ancient Egyptians successfully practised what we now call primary prevention.

Most modern countries base their structure on an adjectivally qualified form of democracy—parliamentary democracy. This compromise has shown its limitations in recent centuries. For example, in the United Kingdom it has been noted on two occasions—the Tudor period and the 18th century—that economic prosperity precipitated a plethora of forms of medico-social pathology, including high prevalence rates of sexual infections.

Some consider that since the mid-1950s, and particularly throughout the 1960s, history has been repeating itself. As in the past two eras, economic prosperity has featured scientific discoveries and technological innovations in plenty. It has also fostered demands for relaxation from a host of social, religious, sexual and legal constraints. On each occasion this has led a growing minority to interpret liberalism as licence. Not surprisingly, we find growing numbers involved in crimes against people and property, in the numbers involved in alcohol and drug abuse and increased prevalence of the sex infections.

Today, many of these problems first show in the years of adolescence—12–21 for females and 14–25 in males. To combat them we deploy remedial services, that is we pursue secondary prevention in the form of health education, cures and counselling. In epidemiological control terms our successes are limited. Our failures are proving costly.

It was this last feature which produced a backlash to the Tudor and 18th century eras of social disintegration. It was men who cried "Enough". Thus the Tudor era was followed by Cromwell's puritanical Commonwealth and the 18th century by uptight Victorianism. Many believe men's "corrections" were overdone and precipitated other unacceptable problems. Should we leave dealing with the present situation to men? Could we do better?

Over the last 30 years the power and influence of women outside the home has been growing. Individual young women who have achieved sex equality now appear to be moving from a "me"-orientation to life, to greater involvement in public affairs. Some are already acting in unison. For example, British women converts to the Muslim faith, we are told, want "to revive the importance of the family".⁴⁸ Are such trends the shadows cast by coming events? Can we really hope for a time when a joint and complementary approach by men and women could forge the ways and means to alleviate our current medico-social ills and perhaps consider the possibilities of primary prevention?

Viewing the machinery that moves us with an historical perspective offers the freedom of choice.

Thanks for helpful guidance are due to Carol Andrews, the Department of Egyptian Antiquities, the British Museum; Carole Reeves, author of *Egyptian Medicine* (see Reference 36); Victoria Coxon, historian, and Prof. M. A. Zahran, Department of Plant Ecology, Monsoura University, Egypt, currently with the Department of Botany, University of Sheffield.

- 1 Berger PL. *Invitation to Sociology*. Penguin Books, Harmondsworth, England, 1966:199. (Originally published by Doubleday, USA, 1963).
- 2 Morton RS. Sexual Attitudes, Preferences and Infections in Ancient Greece: has antiquity anything useful for us today? *Genitourin Med*, 1991;67:59–66.
- 3 Murnane WJ. *The Penguin Guide to Ancient Egypt*. London: Penguin Books, 1983:146–52.
- 4 Ibid. pp. 118–121.
- 5 Ibid. pp. 351–6.
- 6 Morton RS. *Sexual Freedom and Venereal Disease*. London: Peter Owen, 1970, Chap. 1.
- 7 Chiarelli B, Masali M, Davide D. Ricerche sulle collezioni antropologiche egiziane dell'Istituto di Antropologia di Torino. *Riv di Antropologia* 1966;53:61–9.
- 8 Dixon DM. The disposal of certain personal, household and town waste in Ancient Egypt. In: PJ Ucko, R Tringham and GW Dimbleby, eds *Man, Settlement and Urbanism*. Duckworth, London, 1972.
- 9 Aldred C. *Egyptian Art in the Days of the Pharaohs 3100–320 BC*. London: Thames & Hudson 1980:19–30.
- 10 Leca A-P. *La Médecine Egyptienne au temps des Pharaons*. Paris: Decosta, 1971:19–20.
- 11 Erman A. *Life in Ancient Egypt*. (Translated by HM Tirard). London: MacMillan, 1894:153 (Chapter 2).
- 12 Trigger BG, Kemp BJ, O'Connor D and Lloyd AB. *Ancient Egypt—a Social History*. Cambridge: C.U.P. 1983:312.
- 13 Ghalioungui P. *Magic and Medical Science in Ancient Egypt*. London: Hodder & Stoughton, 1963:113.
- 14 Tyldesley J. *Marriage and Motherhood in Ancient Egypt*. *History Today* 1944;44:20–26. (The author's book "Daughters of Isis: the Women of Ancient Egypt" is due for publication by Viking in 1994.)
- 15 Robins G. *Women in Ancient Egypt*. British Museum Press, London, 1993:106–7.
- 16 Ibid. pp. 144–156.
- 17 Murnane WJ. Op cit. see 3 above, p. 271.
- 18 Manniche L. *Sexual Life in Ancient Egypt*. London: KPI Ltd, 1987:74–95.
- 19 Ibid. pp. 95–103.
- 20 Rowling JT. In: RA David, ed. *Science and Egyptology*. Manchester University Press, 1986:408.
- 21 University of London, Petrie Museum holding No. U.C. 320057.
- 22 Robins G. Op cit. see 15 above, p. 80.

- 23 Ibid. p. 88.
- 24 Ghalioungui P. Op cit. see 13 above, p. 49.
- 25 Manniche L. Op cit. see 18 above, p. 17.
- 26 Ibid. p. 20.
- 27 Leca A-P. Op cit. see 10 above, p. 422.
- 28 Ibid. p. 423.
- 29 Manniche L. Op cit. see 18 above, p. 73.
- 30 Ibid. pp. 28/29.
- 31 Ibid. Op cit. see 18 above, p. 18.
- 32 Ghalioungui P. Op cit. see 13 above, p. 93.
- 33 Ebbel L. *The Ebers Papyrus*. Copenhagen: Levi 1937: 108-13.
- 34 Ghalioungui P. Op cit. see 13 above, p. 149.
- 35 Heframi F. Gay, *Ég Soc Gyn Obst*, 1960;10:135.
- 36 Reeves C. *Egyptian Medicine*. Bucks, UK: Shire Publications, 1992:40.
- 37 Shanahan D. Cloak and Dagger—studies of chlamydial peritonitis in humans and mice. Paper read at meeting of Medical Society for the Study of Venereal Diseases, London, 30 November, 1990.
- 38 Cockburn A and E. *Mummies, Disease and Ancient Culture*. Cambridge: C.U.P. 1980:34.
- 39 Ghalioungui P. Op cit. see 13 above, p. 120.
- 40 Ebbel L. Op cit. see 33 above, p. 100.
- 41 Morton RS. *Gonorrhoea*. London: Saunders 1977, Chap. 1.
- 42 Lortet A, Gaillard C. La Laune Momifiée de L'Ancienne Egypt et Recherches Anthropologiques, troisième série. Extrait des Archives du Muséum d'Histoire Naturelle de Lyon, 1907.
- 43 Hussein MK. *Bull Inst Eg* 1949-50;32:11.
- 44 Elliot-Smith G. The alleged discovery of syphilis in pre-historic Egyptians. *Lancet* 1908;i:521-4.
- 45 Elliot-Smith G, Dawson WWR. *Egyptian Mummies*. London: Kegan Paul, 1924:157.
- 46 Cockburn A and E. Op cit. see 38 above, pp. 34-36.
- 47 Morgan, Lady. *Woman and her Master* London: Colburn, 1840;i:49.
- 48 Batool Al Toma of Leicester Islamic Foundation, as quoted by Lesley Thomas, Religious Affairs Correspondent, in *Sunday Times*, 4 September 1994.